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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/822,480	04/12/2004	Kazuhiro Yagishita	8305-245US (NP156-1)	3127
570. 7590 01/20/2010 PANITCH SCHWARZE BELISARIO & NADEL LLP ONE COMMERCE SQUARE 2005 MARKET STREET, SUITE 2200 PHILADELPHIA, PA 19103				
EXAMINER				
MCAVOY, ELLEN M				
ART UNIT		PAPER NUMBER		
1797				
NOTIFICATION DATE		DELIVERY MODE		
01/20/2010		ELECTRONIC		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

usptomail@panitchlaw.com

# Office Action Summary

**Application No.**

10/822,480

**Applicant(s)**

YAGISHITA ET AL.

**Examiner**

Ellen M. McAvoy

**Art Unit**

1797

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 02 November 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1 and 7-9 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 and 7-9 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/22)
- 4) ☐ Interview Summary (PTO-413)
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_
- Paper No(s)/Mail Date \_\_\_\_\_

***Continued Examination Under 37 CFR 1.114***

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicants' submission filed on 02 November 2009 has been entered.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1 and 7-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kaneko et al (EP 0 889 112 A1).

Kaneko et al ["Kaneko"] discloses a lubricating oil composition for an automatic transmission comprising a major amount of a base oil and as additives (a) 0.02 to 4% by weight of a succinimide compound of formula (I), (b) 0.02 to 5% by weight of at least one metal salt (preferably an alkaline earth metal) of an organic acid selected from the group consisting of sulfonates, phenates, salicylates and phosphonates, and (c) 0.01 to 5% by weight of at least one compound selected from phosphate esters, phosphite esters and acid phosphite esters. See pages 4-5. While Kaneko allows for the addition of conventional lubricant additives to the composition including amine-type and phenol-type antioxidants, Kaneko does not require the

addition of zinc dialkyldithiophosphate. Thus the examiner is of the position that the lubricant compositions of Kaneko meet the limitations of the claims. Although a total sulfur content of the composition of 0.05 % by mass (500 ppm) or less is not set forth, there are no sulfur-containing components that are required to be present so this claim limitation appears to be met.

***Claim Rejections - 35 USC § 103***

Claims 1 and 7-9 are still rejected under 35 U.S.C. 103(a) as being unpatentable over Nakazato (6,569,818) in combination with Minami et al (5,792,733) or Nishikawa et al (5,245,070).

Applicants' arguments filed 02 November 2009 have been fully considered but they are not persuasive. As previously set forth, Nakazato et al ["Nakazato"] disclose a lubricating oil composition having a low phosphorus (P) content of 0.01 to 0.1 weight %, a sulfur content of 0.01 to 0.3 weight % and a sulfated ash of 0.1 to 1 weight %, which is comprised of (a) a major amount of mineral base oil having a low sulfur (S) content of at most 0.1 weight %, preferably at most 0.005 weight %, (b) an ashless alkenyl or alkyl-succinimide dispersant or derivative thereof in an amount of 0.01 to 0.3 weight % in terms of nitrogen atom content, (c) a metal-containing detergent such as an alkali metal or an alkaline earth metal salt of an alkylsalicylic acid in an amount of about 0.2 to 7 weight %, and may include other metal detergents such as sulfonate detergents, (d) a zinc dialkyl-dithiophosphate in an amount of 0.01 to 0.1 weight % in terms of a phosphorus content, and (e) an oxidation inhibitor selected from the group consisting of a phenol compound and an amine compound in an amount of 0.01 to 5 weight %. See column 2, line 25 to column 3, line 7. Nakazato teaches that the lubricating oil composition may be used in

internal combustion engines including gas engines. See column 1, lines 5-11. Nakazato teaches that the lubricating oil compositions may contain other auxiliary additives such as phosphoric acid esters and phosphorous acid esters. Nakazato teaches that the additives can be incorporated into the lubricating oil compositions in an amount ranging from about 0.001 to 3 weight %. See column 7, line 59 to column 8, line 11. Applicants' invention differs by claiming a specific phosphorus acid ester compound, that of a triphosphate set forth by formula (1) in claim 1. However, as evidenced by Minami et al ["Minami"] or Nishikawa et al ["Nishikawa"], such triphosphate compounds are well-known in the art as antiwear agents in lubricating oil compositions. See the phosphorus-containing compounds represented by the formula in col.1, lines 52-58, in Minami, wherein the X substituents may all be oxygen. Minami also discloses lubricating oil compositions suitable for use in internal combustion engines in column 2, lines 3-23. Nishikawa discloses alkyl phosphates in column 2, lines 9-15, which may be used as an additive to lubricants. Having the prior art references before the inventors at the time the invention was made it would have been obvious to the skilled oil formulator to have added the triphosphate compound of either Minami or Nishikawa to the oil composition of Nakazato if its known imparted property was so desired. The examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, the motivation relied on by the examiner is the

disclosure in Nakazato allowing for the addition of phosphorus-containing compounds to the lubricating oil compositions.

In response applicants amended independent claim 1, the only independent claim presented, to include that component (C), the alkali metal or alkaline earth metal detergent, is now required to be a salicylate detergent which has a metal ratio of 1.5 or less. Applicants argued that the advantageous effects achieved by the presently claimed composition are clearly demonstrated in Tables 1 and 2 in the specification. Applicants argued that the composition of Example 9 which contains no ZnDTP and a calcium salicylate detergent with a metal ratio of 2.7 exhibited better slipping velocity in the LFW-1 boundary friction test than the composition of Comparative Example 3 which contains the same amount of the same salicylate detergent and also contains ZnDTP. This is not deemed to be persuasive for several reasons. First, it is not clear that the results presented are unexpected to one of ordinary skill in the art. In Example 9, the slipping velocity average value is 0.124. For Comparative Example 3, the slipping velocity average value is 0.146 or a difference of 15%. However, the total sulfur content in Example 9 is 0.05 mass%, and the total sulfur content in Comparative Example 3 is 0.21 mass% which is directly due to using a ZnDTP compound having a 18.8 mass % sulfur content. Now, the lubricating compositions of Nakazato are required to have a sulfur content between 0.01 and 0.3 wt.%, the lower limit of which is 5X lower than Example 9 of applicants' invention. The examiner is of the position that the 15% increase in slipping velocity is due to the presence of a high amount of sulfur in the comparative example which is not required to be present in the Nakazato compositions.

Applicants further argued that inventive Example 1 exhibited better base number retaining properties in the ISTO test than composition in Example 2 which contains ZnDTP. Applicants argued that these results clearly demonstrate the superior results that are achieved by including the claimed salicylate detergent and in the absence of ZnDTP. This is not deemed to be persuasive because again applicants are comparing a composition containing a very low sulfur content (0.05 mass%) in Example 1 versus a composition containing a much higher sulfur content (0.21 mass %) in Comparative Example 2 which is directly due to using a specific ZnDTP compound having a very high sulfur content of 16 mass %. As set forth above, the lubricating compositions of Nakazato may have sulfur contents in the range of 0.01 to 0.3 wt. % which may be below applicants' inventive examples containing 0.05 mass % sulfur.

Further applicants argued that all of the Examples set forth in Table 3 in Nakazato contain ZnDTP at a phosphorus content of 0.03 wt.%. And that applicants cannot understand why one skilled in the art would have been motivated based on Nakazato to omit a component which is taught to be essential and which is taught to provide desirable high heat resistance. This is not deemed to be persuasive because zinc dialkyldithiophosphates are extremely well known lubricating oil additives which are effective as antioxidants and as extreme pressure/anti-wear agents. Nakazato teaches the addition of conventional zinc dialkyldithiophosphates to the lubricant composition in a very minor amount of 0.01 weight % in terms of a phosphorus content. Further, the examiner maintains the position that it would have been obvious to the skilled artisan to have removed an element in a composition if the function of that element was not desired. See MPEP 2144.04. The examiner maintains the position that it would have been obvious to the skilled oil formulator to have omitted the conventional zinc dialkyldithio-

phosphate component from the lubricating oil composition of Nakazato if the function attributed to the component was not desired or required. See *Ex Parte Wu*, 10 USPQ2031 (Bd. Pat. App. & Inter. 1989).

The rejection of claims 1-5 and 7-9 under 35 U.S.C. 103(a) as being unpatentable over Ho et al (6,001,780) in combination with Minami et al (5,792,733) or Nishikawa et al (5,245,070) made in the previous office action is withdrawn in view of applicants arguments. Specifically that Ho discloses as the metal detergent component a metal salt of multi-hydroxy alkyl or alkenyl aromatic compounds which appears to differ from salicylates of the claims which contains only one hydroxy group (not multi-hydroxy).

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ellen M. McAvoy whose telephone number is (571) 272-1451. The examiner can normally be reached on M-F (7:30-5:00) with alt. Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Caldarola can be reached on (571) 272-1444. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Ellen M McAvoy/  
Primary Examiner  
Art Unit 1797

EMcAvoy  
January 12, 2010